



MINISTER'S PRESS BRIEFING

“Keeping the lights on, keeping the nation moving”

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MINISTER FOR ENERGY

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OUTLINE

- THE MINISTRY'S OBJECTIVES
- KEEPING THE LIGHTS ON
 - Power Supply
 - Stable Electricity Prices
 - Renewable Energy
- KEEPING THE NATION MOVING
 - Ensuring availability of petroleum products amidst global crisis
 - Interventions to increase reserve and revenue
- GHANAIAN CONTENT AND GHANAIAN PARTICIPATION
- ENERGY TRANSITION - THE GHANA NARRATIVE

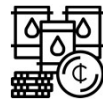




THE MINISTRY'S OBJECTIVES



Provide stable, realistically priced, and universally accessible electricity



Ensure availability and realistic pricing of petroleum products



Increase crude oil reserves to improve revenue



Ensure that Ghana's energy transition happens on our terms



Ensure Ghanaian content and Ghanaian participation at all levels of the energy value chain



Keeping the lights on





POWER GENERATION

What Exists

- ▶ Numerous PPAs
- ▶ Excess Capacity + Associated Payments
- ▶ Government Guarantees
- ▶ Take or Pay.



What We Are Doing

- New Policy Direction on PPAs
- Prudent Addition of Generation Capacity
- Increasing share of renewable energy



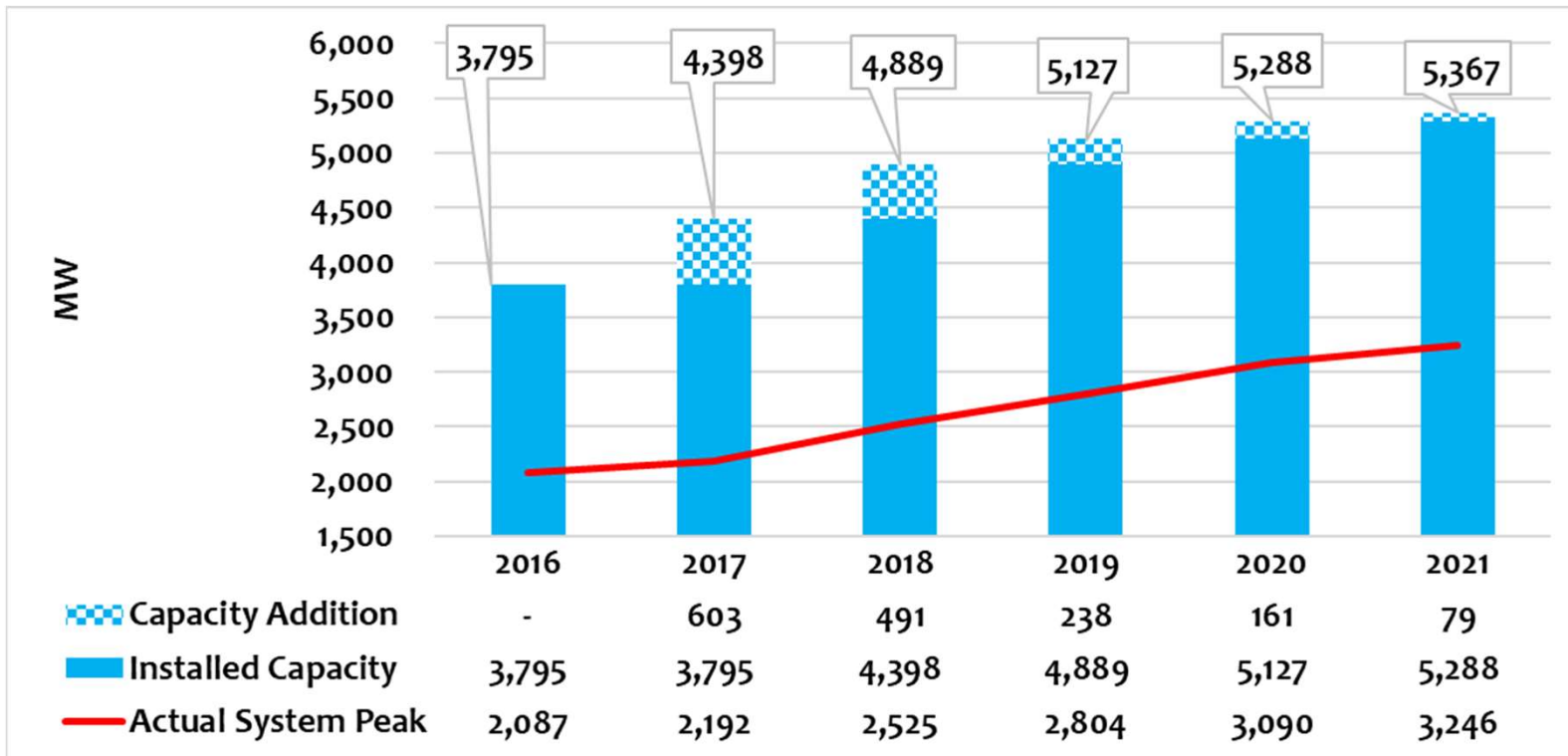
POWER GENERATION

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Way Forward for Contracting of PPAs

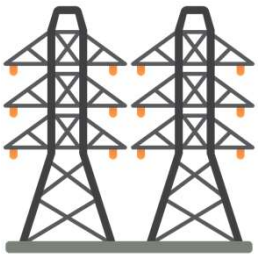
- ▶ Take-and-Pay
- ▶ No more Government Guarantees
- ▶ No more Tax Exemptions
- ▶ Cap on Energy Tariff
- ▶ Tariffs will be denominated in Ghana Pesewas
- ▶ Bank Liquidity support to be provided.

Peak and Installed Capacity Analysis



2022 SYSTEM PEAK = 3,469 MW recorded on March 18, 2022
AVAILABLE CAPACITY FOR SAME DAY = 3,861MW

BREAKDOWN OF POWER PLANT ADDITION	
2017	
AKSA	260
ASOGLI	180
KARPOWERSHIP	235
total	675
2018	
AKSA (PHASE 2)	110
CENPOWER	360
MIENERGY	20
total	490
2019	
TT2PP	7
AMANDI	203
GENSER	29
total	239
2020	
EARLY POWER	144
BUI SOLAR	10
VRA SOLAR	7.5
TSATSADU HYDRO	0.045
total	161.55
2021	
DAMANG (GENSER)	28
BUI SOLAR	41
VRA SOLAR	10
total	79

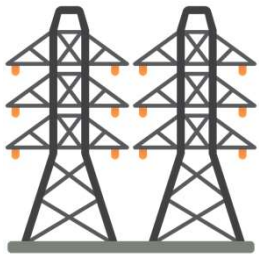


POWER TRANSMISSION



Upgrading Power Lines to reduce losses and increase transmission capacity.

The Kumasi -Kintampo section completed and energized to improve the voltages in the Ashanti and Northern Regions. This completes the entire 330kV Kumasi – Bolgatanga Transmission line which supports exporting power to the Burkina Faso through the existing 225kV interconnection line..



POWER TRANSMISSION



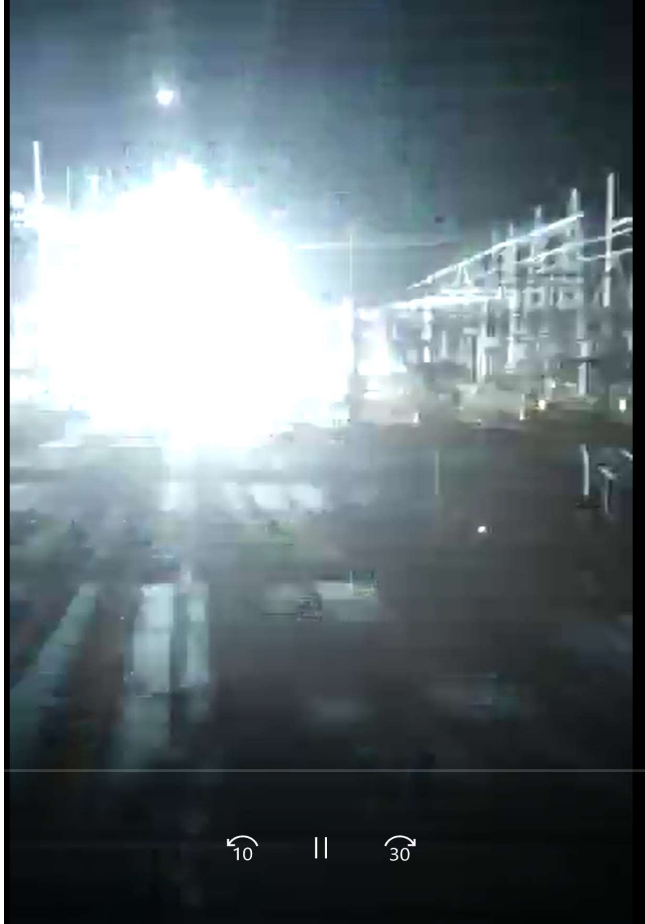
Introducing more Bulk Supply Points (BSPs) to improve power supply reliability

1. Construction of the 580MVA Pokuase BSP

This is the biggest substation with a productive capacity of 580 MVA. The successful commissioning of the project has brought a remarkable improvement in the reliability of power supply to Pokuase and its environs.

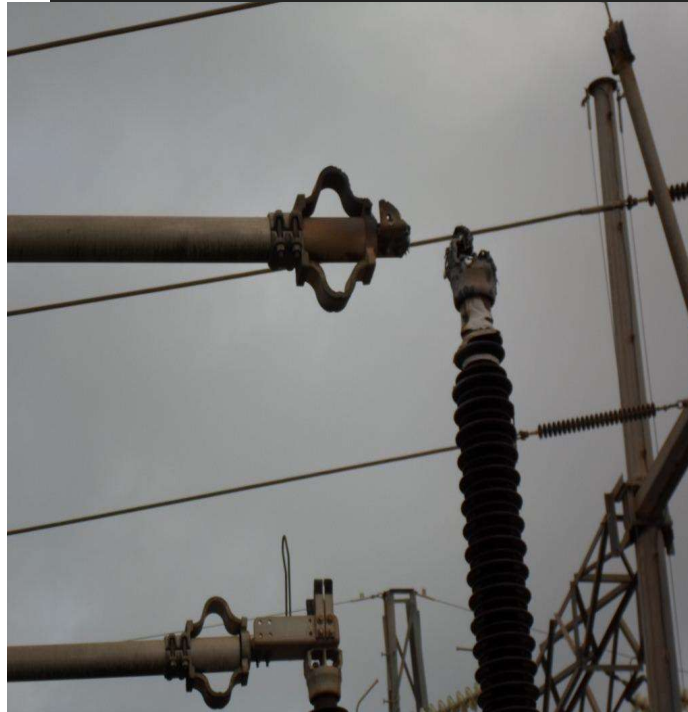
2. Construction of the 435MVA Kasoa BSP

This is the second largest BSP with a productive capacity of 435MVA. This has resulted in a significant improvement in the reliability of power supply to Kasoa and its environs.



**Aboadze Substation:
Fire Outbreak on the Disconnect**

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**Aboadze Substaion:
Damage to disconnect
open and close terminal**



**Aboadze Substaion:
Damage to disconnect
open and close terminal**



**Kasoa Substation
Hotspot on the Terminal (SVC)**

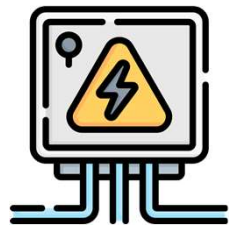
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**Kasoa Substation
Damage to underground cables
evacuating power from the substation**



**Kasoa Substation
Damage to underground cables
evacuating power from the substation**



POWER DISTRIBUTION



Loss Reduction Strategies

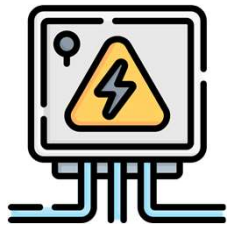
- ***Meter Management Systems (MMS)***

Harmonisation of several metering systems, remote and early detection of faults and managing all metering systems on a common platform and therefore reducing workload and stress of ECG workers

- ***Geographic Information Systems (GIS)***

Help ECG attain an accurate asset inventory with electric poles, transformers, cable lines, substations and other electric utility assets .

- Analyse its network usage patterns;
- Recognise problems and risks like power outages;
- Have oversight about energy consumption;
- Find potential threats to the distribution network; and also,
- Manage utility asset repairs.



POWER DISTRIBUTION

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Loss Reduction Strategies

- ***Enterprise Resource Planning (ERP)***

Integration of all ECG business processes to facilitate seamless workflow for efficient operations.

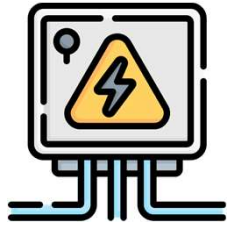
- ***ECG Boundary Metering & Distribution Transformer Metering***

Enhance energy accounting and distribution system loss measurement.

- 9 operational regions (Accra East, Accra West, Tema, Central, Western, Eastern, Volta, Sub-Transmission & Ashanti SBU) completed
- 84 operational districts yet to start Enterprise Resource Planning (ERP)

- ***Voltage Current and Time (VIT) Smart Technology***

For Optimizing, Designing and Installation of VIT feeder automation scheme on 33kV and 11kV distribution feeders to reduce outage time and improve customer experience



POWER DISTRIBUTION

ECG System Loss Trend Analysis

LOSSES EQUIVALENCE IN GHANA CEDIS

DESCRIPTION	2017	2018	2019	2020	*2021	TOTAL
Technical Losses (GHS)	438,449,669.30	529,102,673.92	617,634,726.80	640,908,278.58	653,005,265.40	2,879,100,614.00
Commercial Losses (GHS)	873,492,900.69	969,258,950.09	1,088,544,558.53	1,400,138,060.61	1,785,104,205.06	6,116,538,674.98
System Losses (GHS)	1,311,942,569.99	1,498,361,624.01	1,706,179,285.33	2,041,046,339.19	2,438,109,470.47	8,995,639,288.99
Collection Losses (GHS)	103,160,000.00	918,930,000.00	79,990,000.00	1,485,140,000.00	1,537,880,000.00	4,125,100,000.00
1% reduction in system Loss (GHS) Yearly	54,100,812.10	61,661,052.73	69,130,746.31	77,913,863.81	80,447,092.32	343,253,567.26

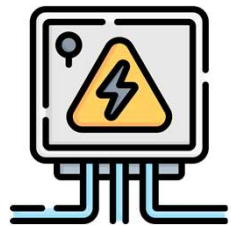
LOSSES (%)

Losses (%)	2017	2018	2019	2020	*2021
Technical Losses (%)	10.55	10.55	10.55	9.84	9.84
Commercial Losses (%)	13.70	13.75	14.13	16.36	20.47
System Losses (%)	24.25	24.30	24.68	26.20	30.31

*2021 is as at November, 2021.

Note: World Bank Benchmark for Technical Losses - 7.44% (Based on Load Factor or constraints within the system)

The Collection Losses (GHS) is the shortfall of receivables



POWER DISTRIBUTION

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Loss Reduction strategies

- ***ECG Revenue Protection Task Force***
 - Relunched September 2021
 - ✓ To identify power theft
 - ✓ Recover debt across consumers
- ***Implementation of the Cash Waterfall Mechanism and Natural Gas Clearinghouse***

This has ensured payment to all players in the value chain to stay financially viable.

National Electricity Coverage is 87.03%

POWER COMMITMENT

IMPROVE GRID STABILITY

- Relocation of 250MW Ameri Plant from Takoradi to Anwomaso, Kumasi and completion of Gas Pipeline construction to Anwomaso.
- Relocation of 80MW VRA Siemens Thermal Power Plant to Kumasi.
- Proposal for combined cycle plant from AKSA (250MW) received and reviewed.
- Received KARPOWER (235MW) proposal for Kumasi

TARIFFS RATIONALIZATION

- We are collaborating with the Public Utility Regulatory Commission to rationalize electricity tariffs to make the methodology transparent and the tariff structure non-punitive.

IMPROVE POWER SUPPLY RELIABILITY

- Reconstruction of transmission line from Achimota to Mallam substations.
 - Phase I of the exercise (Mallam-Avenor) completed November 2021
 - *Phase 2 will be from Achimota to Avenor – it may necessitate interruptions. This will be duly communicated if the need arises.*
 - *BSPs in Kasoa and Pokuase have enough transformer capacity to meet demand without load shedding*

RENEWABLE PROJECTS

ACTIVITIES COMPLETED



Power Generation (Solar)

- Meinergy Solar - 20MW (2017)
- VRA Solar Lawra/Kaleo – 19MW – (2021)
- BUI Solar – 51MW and others (2021).

Off-grid Generation (Solar)

- Total Off-grid & Distributed Solar PV Generation - 24.3MW – 2017-2021
- 26 micro-grids for hospitals 58 KW – 2017
- Jubilee House Phase 1 550kW - 2021.

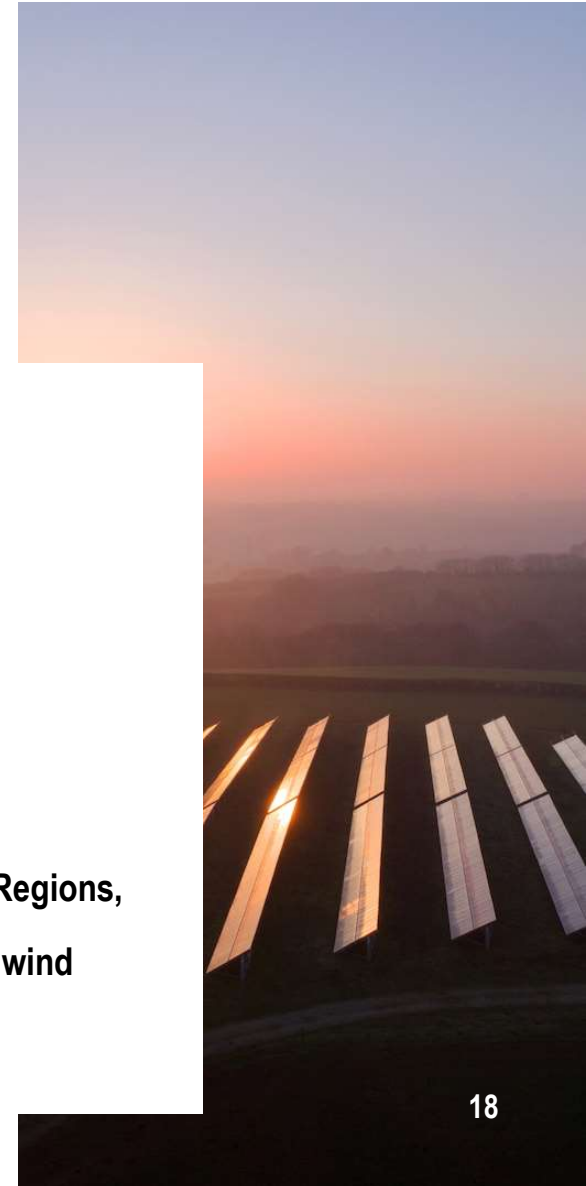
Improved Cooked Stove Distribution

- Improved Cook Stoves Distribution Project – 240,000 stoves Distributed (8 Regions) -2021
- GIZ-Forest Landscape Restoration Through Sustainable Wood Energy Value Chain; 237.32 ha of woodlot and 756 ha of degraded natural forest rehabilitated

RENEWABLE PROJECTS

ONGOING PROJECTS/ACTIVITIES

- **Scaling-up Renewable Energy Program SREP (80MW)**
 - 38 mini grids,
 - 35,000 Solar Home Systems (SHS) for off grid communities and,
 - 12,000 Net Metering PV for SMEs/Public Buildings/SHS
- **BUI Solar – 150 MW,**
- **Complete Jubilee House Solar Phase II to a total of 912 KW**
- **Improved Cookstoves Distribution (ICS) Project; 260,000 to be Distributed in the remaining Regions,**
- **Ongoing PPA negotiations/discussion between ECG and Lekela 225MW, and EleQtra 50MW wind projects in line with the new directive for PPA.**



A long-exposure photograph of a highway at night, showing light trails from cars in white and blue on the left and orange and red on the right. The road curves into the distance under a dark sky.

Keeping the Nation Moving



ENSURING AVAILABILITY OF PETROLEUM PRODUCTS AMIDST GLOBAL CRISIS

1. Engagement with BoG

- assist with the securing of forex
- special forex auctions for the petroleum downstream
- Establishing a credit reference bureau for all Dealers, OMCs, BDCs, IOTCs and other stakeholders.

2. In collaboration with Ministry of Finance, statutory margins on Petroleum products were reduced by a total of 15 pesewas (UPPF, BOST margin and Fuel Marking Margin)

3. OMCs agreed to have their margins between 40 and 60 pesewas

4. Arrangements put in place to allow International Oil Trading & Contractors to bring on land petroleum products and hold titles to these products.



ENSURING AVAILABILTY OF PETROLEUM PRODUCTS AMIDST GLOBAL CRISIS

- 5. BOST is expected to hold up to 6 weeks strategic stocks.**
- 6. Implement the LPG for Development programme.**
- 7. NPA to enhance monitoring to reduce fuel smuggling and dumping**
- 8. Selecting a strategic partner to rehabilitate Tema Oil Refinery (TOR)**
- 9. Establishment of the Petroleum Hub.**



INTERVENTIONS TO INCREASE RESERVES AND REVENUE

1. Voltaian Basin Projects (Currently in exploration phase). *(ongoing)*
2. Acquisition of Aker's stake in the Deep Water Tano/Cape Three Points (DWT/CTP) Block by GNPC. *(ongoing)*
3. Acquisition of part of Oxy-Anadarko stake by GNPC in Jubilee and TEN FIELDS. *(completed)*
4. Tullow Oil to drill six (6) wells as part of its Value Maximization Plan (VMP). *(ongoing)*
5. Unitization of Afina and Sankofa fields to reduce cost of development, maximize recovery and improve revenue. *(ongoing)*
6. Offer blocks for Petroleum Agreements .



Energy Transition

Global Context:

Pathway toward transformation of the global energy sector from fossil-based fuel to zero carbon by the second half of this century (IRENA)



Local Context: We want to transition to a low carbon society

Drivers of Energy Transition

- Paris Agreement on Climate Change - Reduction in global emissions
- The UN SDG 7 – Ensure access to affordable, reliable, sustainable and modern energy for all.
- The Call for Action Conference of Parties (COP 26) - Increase investments in green energy initiatives.

Target :
Attain Net Zero by 2070



Potential Effect on Ghana

- Threat to energy security
- Reduced funding for fossil related projects
- Stranded assets
- Job losses in the fossil fuel industry
- Potential Revenue Loss.

What Ghana should do

- Develop a national energy transition blueprint
- Embark on massive afforestation and reforestation programmes
- Explore domestic and regional capital market for energy infrastructure development
- Increase the share of clean energy (renewable, nuclear, gas-to-power, hydrogen) in the generation mix.



Current Energy Transition-Related Activities

1. Achieved 2.4% Renewable Energy penetration (Mienergy (20 MW), BXC (20 MW), BPA Solar (51MW, etc.)
2. Developed a Renewable Energy Master Plan
3. Achieved 95% Conversion of thermal plants from Liquid fuels to Natural Gas
4. Development of Nuclear Power Programme
5. LPG for Development
6. Improved Charcoal Stoves distribution
7. Replacement of kerosene lanterns with solar lanterns
8. Conversion of Single cycle thermal plants to combine cycle thermal plants
9. Zero Gas Flaring Policy
10. Adopting e-mobility

Towards the realization of Energy Transition on our terms;

1. Energy Transition Committee set up to draft a national energy transition plan
2. Nationwide consultations ongoing to solicit inputs for the draft plan.

Ghanaian Content and Ghanaian Participation



- Petroleum (Local Content and Local Participation) (Amendment) Regulations, 2021. (L.I. 2435) has been passed to include channel partnerships and strategic alliances in the petroleum upstream sector.
- Draft Regulation for Ghanaian Content and Ghanaian Participation for the downstream sector under review
- Legislative Instrument (LI 2354) on Local Content and Local Participation in the Electricity Supply Industry passed in 2017

CONCLUSION

- **We will add more generation capacity necessary.**
- **We will locate power generation in the middle and northern sector to improve grid stability.**
- **We have put in place measures to prevent petroleum product scarcity and also ensure price stability.**

Thank You!

